FACT

044 FIRE EXTINGUISHERS

Kansas State Fire Marshal Prevention Division

FIRE FACT NO. 044 CHECKLIST(s): 99

TITLE: FIRE EXTINGUISHER MAINTENANCE / USE

CHECKLIST ITEM(s): 99-12

REFERENCE(s): 91-101/31-1.3.1, K.A.R. 22-10

PAGE 1 of 3

Classification of portable extinguishers - Portable extinguishers are rated for effectiveness and used on fires as classified: A- ordinary materials, B- flammable liquids, C- electrical and D- combustible metals. The classification of extinguishers consists of a LETTER, such as "A", for the class of fire, preceded by a rating NUMERAL, such as "2", that indicates the relative extinguishing effectiveness.

This agency recommends that an extinguisher with a minimum of a 2A UL rating be used in all but high hazard areas of a structure. In high hazard areas where Class B flammable materials are used or stored in above normal quantities extinguishers with a minimum of a 2A 10BC rating should be installed unless otherwise indicated. Personnel should be trained in the proper use of the extinguisher.

Inspection - An inspection is a "quick check" that an extinguisher is available and will operate. It is intended to give reasonable assurance that the extinguisher is fully charged and operable. All extinguishers shall be inspected when initially placed in service and thereafter at approximately 30-day intervals. When this monthly inspection is performed, the date of the inspection and the initials of the person performing the inspection shall be recorded. There should be space provided on the annual maintenance tag. This type of an inspection may be performed by facility personnel without being certified by the State Fire Marshal.

Annual Maintenance – Extinguishers shall be subjected to maintenance not more than one year apart or when specifically indicated by an inspection. Maintenance procedures shall include a thorough examination of the three basic elements of an extinguisher:

- a) mechanical parts
- b) extinguishing agent, and
- c) expelling means.

Annual maintenance may only be performed by personnel of a firm certified by the State Fire Marshal.

Six Year Maintenance - Every six years, stored pressure extinguishers that require a 12-year hydrostatic test shall be emptied and subjected to the applicable maintenance procedures. When the applicable maintenance procedures are performed during periodic recharging or hydrostatic testing the six-year requirement shall begin from that date. Six year maintenance may only be performed by personnel of a firm certified by the State Fire Marshal.



Kansas State Fire Marshal Prevention Division

FIRE FACT NO. 044 CHECKLIST(s): 99

TITLE: FIRE EXTINGUISHER MAINTENANCE / USE

CHECKLIST ITEM(s): 99-12

REFERENCE(s): 91-101/31-1.3.1, K.A.R. 22-10

PAGE 2 of 3

Hydrostatic Testing - All refillable fire extinguishers require hydrostatic testing, at intervals varying according to the type of extinguisher. Hydrostatic testing is required for all stored pressure extinguishers every 12 years, for stored pressure water or foam type extinguishers every 5 years and Carbon Dioxide (CO2) extinguishers every 5 years. CO2 type extinguishers may only be tested by a firm with a DOT certified test station.

Hydrostatic testing shall be performed by personnel of firms certified by the State Fire Marshal, trained in pressure testing procedures, safeguards, having suitable testing equipment, facilities, and appropriate servicing manuals.

Distribution of Fire Extinguishers - Portable fire extinguishers are most effectively utilized when they are readily available in sufficient number and with adequate extinguishing capacity for use by persons familiar with their operation.

In fire emergencies where extinguishers are relied upon, someone usually has to "travel" from the fire to obtain the device, and then return to the fire before using it. The "time" required to accomplish this is determined mainly by the "travel distance" involved in securing the extinguisher and placing it in operation.

Travel distance is the actual distance the user of the extinguisher will need to walk. Consequently, travel distance will be affected by partitions, location of doorways, aisles, piles of stored materials, machinery, desks, tables, etc. For schools the travel distance to a fire extinguisher shall not exceed 75 feet unless in a high hazard areas (wood or metal shop, chemistry laboratory) where the travel distance shall be reduced to 50 feet.

EXTINGUISHER PLACEMENT

The actual placement of fire extinguishers can best be accomplished through a physical survey of the area to be protected. In general, locations should be selected that will:

- a) provide uniform distribution
- b) provide easy access
- c) be free from obstruction by storage and/or equipment
- d) be near normal paths of exit travel
- e) be free from potential physical damage
- f) be readily visible.

Kansas State Fire Marshal Prevention Division

FIRE FACT NO. 044 CHECKLIST(s): 99

TITLE: FIRE EXTINGUISHER MAINTENANCE / USE

CHECKLIST ITEM(s): 99-12

REFERENCE(s): 91-101/31-1.3.1, K.A.R. 22-10

PAGE 3 of 3

CERTIFICATION TO SERVICE FIRE EXTINGUISHING EQUIPMENT

Firms that service, inspect, or install fire extinguishers are required to be certified by the State Fire Marshal in accordance with K.S.A. 31-133a. Article 10 of the Kansas Fire Marshal Administrative Regulations K.A.R. 22-10-1 through 22-10-19 apply to the servicing firms for certification, compliance and consumer protection. Classes of businesses to be certified:

- RA permits servicing, charging, recharging, installing or inspecting of fixed extinguishing systems providing proof of manufacturers authorization.
- RB permits servicing, charging, recharging, installing or inspecting of portable fire extinguishers.
- RC permits hydrostatic testing on non-DOT cylinders such as wet or dry chemical containers.
- RD permits servicing, charging, recharging, installing or inspecting fixed extinguishing systems having proof of manufacturers training or experience passing State Fire Marshal examination annually.

TO BECOME CERTIFIED:

A business must submit an application to the State Fire Marshal with the following enclosures for each certification class.

- 1) The applicant shall show proof of insurance appropriate to class covering comprehensive general liability, bodily injury, property damage and completed operations.
- 2) No fee will be charged for any person who is an officer or employee of the state or any political or taxing subdivision of the state when that person is acting on behalf of the state or political or taxing subdivision.
- 3) An on site inspection may be made to insure that the proper equipment is available to service fire protection equipment.

RECOMMENDATIONS FOR FIRE EXTINGUISHER USE

Portable fire extinguishers should only be used:

- 1) after the fire alarm for a building has been sounded, full or partial building evacuation begun, the fire department called, **and**
- 2) by trained staff, and
- 3) the proper extinguisher classification is available, and
- 4) on small contained fires such as trash cans, electrical boxes, kitchen or small equipment.